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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,781	10/11/2001	Fred A. Bunn	1875.0660001	7264

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EXAMINER	
DUONG, OANH L	
ART UNIT	**PAPER NUMBER**
2155	4

DATE MAILED: 06/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/973,981	Applicant(s) COOK ET AL.	
	Examiner Oanh L. Duong	Art Unit 2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 11 October 2001 .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

Claims 1-17 are presented for examination.

Specification Objection

1. The disclosure is objected to because of the following informalities: on page 2, the text of paragraphs 9-12 should be updated with current status of the cited applications such as U.S. Patent Serial No.

Appropriate correction is required.

Claim Objections

2. Claim 1, 2, 4-15 and 17 are objected to because of the following informalities: Acronyms (e.g. DOCSIS, SID, RTP and IP/RTP) should be defined in the claimed invention. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman (US 6,438,123 B1) in view of Birdwell et al (Birdwell) (US 6,032,197).

Regarding claim 1, Chapman teaches a method for dynamically mixing header suppression techniques transmitted over a DOCSIS (data over cable system interface

specification) network (see abstract), comprising the steps of communicating a plurality of suppression techniques and one or more index numbers assigned to each one of the plurality of suppression techniques to a cable modem termination system (CMTS) (see col.4 line 45-col. 5 line 7 and col. 6 lines 14-27); and appending a packet header element to each of the identified data packets (see col. 2 lines 18-20), the header element containing the index number assigned to the header suppression technique selected for each of the identified data packets (see col. 12 lines 42-44); and suppressing each of the identified data packets using the header suppression technique selected for each of the identified data packets (see col. 6 lines 46-col. 7 line 12). Chapman does not explicitly teach receiving, identifying data packets and selecting suppression technique for the identified data packet as claimed. However, Birdwell teaches receiving a plurality of data packets to be transmitted (see fig. 2 col. 4 lines 34-46); and identifying which of the received data packets should be suppressed and selecting header suppression technique for each of the identified data packets (see col. 8 line 57-col. 9 line 7). Therefore, it would have been obvious to have utilized the identifying data packet and selecting suppression technique steps in Chapman as taught by Birdwell because such steps enable a transmitting node to compress header information selectively according to different protocol formats. This provides compression scheme with protocol independence.

Regarding claim 2, Chapman teaches concatenating each data packet within a single DOCSIS transmit burst to form a mixed protocol SID and transmitting the mixed protocol SID to a CMTS (see col. 8 lines 33-52).

Regarding claim 3, Chapman teaches each of the received packets is identified for suppression (see col. 8 lines 3-6).

Regarding claim 4, Chapman teaches DOCSIS protocol header compression is selected (see col. 11 lines 47-54).

Regarding claim 5, Chapman teaches each of the received data packets that are IP/RTP packets with dynamically changing pattern are identified for suppression (see col. 6 lines 20-27). .

Regarding claim 6, Chapman teaches RTP suppression is selected for each of the received data packets that are IP/RTP packets with dynamically changing patterns (see col. 6 lines 20-27 and lines 37-42).

Regarding claims 7 and 8, Birdwell teaches TCP/IP packets are identified for suppression and dynamic delta encoding suppression is selected for IP/TCP packets (see fig. 2 col. 4 lines 42-53 and col. 8 lines 59-62).

Regarding claim 9, Chapman teaches a method for expanding data packet headers transmitted over a DOCSIS (Data Over Cable System Interface Specification) network (see fig. 5), comprising the steps of receiving a mixed protocol SID comprised of one or more data packets suppressed (see col. 6 line 63-col. 7 line 6); identifying each data packet within the mixed protocol SID that is suppressed (see col. 2 lines 12-22 and col. 8 lines 1-39); searching a lookup table to identify a set of rules for expanding the data packet (see col. 6 line 65-col. 7 line 12); and expanding each suppressed data packet according to the set of rules (see col. 7 lines 10-12). Chapman does not explicitly teach a selecting header suppression technique. However, Birdwell teaches selecting

header suppression technique (see col. 8 line 57-col. 9 line 7). Therefore, it would have been obvious to have utilized the selecting suppression technique in Chapman as taught by Birdwell because such selecting suppression technique enables a transmitting node to compress header information selectively according to different protocol formats. This provides compression scheme with protocol independence.

Regarding claim 10, Chapman teaches each data packet has an appended header element containing an index number (see col. 6 line 63-col. 7 line12).

Regarding claim 11, Chapman teaches using index numbers contained in each appended packet header element to search the lookup table (see col. 4 lines 65-67).

Regarding claim 12, Chapman discloses DOCSIS protocol header expansion rules are used (see col. 11 lines 52-54).

Regarding claim 13, Chapman discloses RTP expansion rules are used (see col. 6 line 14-col. 7 line12).

Regarding claim 14, Birdwell teaches Dynamic delta encoding expansion rule are used for IP/TCP packets (see fig. 2 col. 4 lines 42-53 and col. 8 lines 59-62).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 15-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Chapman (US 6,438,123 B1).

Regarding claim 15, Chapman teaches a system for dynamically mixing header suppression techniques transmitted over a Data Over Cable System Interface Specification (DOCSIS) network (see abstract) comprising one or more cable modems that suppress data packets using one of a plurality of header suppression techniques (see col. 3 lines 50-58, and col. 4 line 60- col. 5 line7), a cable modem termination system (CMTS) enabled to expand said data packets using said one of said plurality of suppression techniques, wherein said one or more cable modems assigns one or more index numbers to each one of said plurality of suppression techniques (see col. 6 line 3-col. 7 line12).

Regarding claim 16, Chapman teaches one or more cable modems appends a packet header element to each data packet it suppresses, wherein said packet header element includes said one or more index number assigned to the header suppression technique used to suppress each data packet (see col. 6 lines 46-62).

Regarding claim 17, Chapman teaches one or more cable modems concatenates each data packet it suppressed in to a single DOCSIS transmit burst to form a mixed protocol SID (see col. 8 lines 33-52).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh L. Duong whose telephone number is (703) 305-0295. The examiner can normally be reached on Monday- Friday, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz sheikh can be reached on (703) 305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

O.D
June 23, 2003

HOSAIN T. ALAM
PRIMARY EXAMINER